

an oxidant decomposition unit for sampling pure water already undergone ion exchange in said ion exchanger and decomposing all of oxidants included in sampled pure water into dissolved oxygen;

a measuring device for measuring a first dissolved oxygen concentration in said pure water already undergone ion exchange and a second dissolved oxygen concentration in pure water already decomposed in said oxidant decomposition unit; and

a calculation/control system for calculating a third dissolved oxygen concentration indicating a difference between said first and second oxygen concentrations and adjusting the amount of ultraviolet light of said ultraviolet oxidation unit based on said third dissolved oxygen concentration.

2. (Amended) The ultrapure water producing apparatus according to claim 1, wherein said measuring device including:

a first dissolved oxygen concentration meter for detecting said first dissolved oxygen concentration; and

a second dissolved oxygen concentration meter for detecting said second dissolved oxygen concentration,

wherein said calculation/control system calculates said third dissolved oxygen concentration upon receipt of data from said first and second dissolved oxygen concentration meters and controls the amount of ultraviolet light of said ultraviolet oxidation unit.

3. (Amended) The ultrapure water producing apparatus according to claim 1, wherein said oxidant decomposition unit includes an alkalizing system for alkalizing said sampled pure water already undergone ion exchange by introducing an alkali component.

4. (Amended) The ultrapure water producing apparatus according to claim 1, wherein said oxidant decomposition unit includes an oxidant decomposing system which

A' brings said sampled pure water already undergone ion exchange into contact with platinum or activated carbon.

Sub 5. (Amended) An ultrapure water producing apparatus comprising:  
at least two ion exchangers provided in series;  
a main route provided to flow pure water in the order that said at least two ion exchangers are provided; and  
a plurality of bypass routes connected to said main route such that the pure water flows through said at least two ion exchangers in an order different from the order that said at least two ion exchangers are provided.

6. (Amended) The ultrapure water producing apparatus according to claim 5, wherein:

said at least two ion exchangers at least include a first ion exchanger provided on a most downstream side in which pure water flows and a second ion exchanger;

said plurality of bypass routes at least include a first bypass route, a second bypass route and a third bypass route;

said first bypass route is configured to supply first processed pure water to said second ion exchanger when said first ion exchanger is discharging said first processed pure water;

said second bypass route is configured to send second processed pure water to said main route when said second ion exchanger supplied with said first processed pure water is discharging said second processed pure water; and

said third bypass route is configured to supply pure water to said at least two ion exchangers except an ion exchanger provided on a most upstream side in which pure water flows.

8. (Amended) The ultrapure water producing apparatus according to claim 6,

wherein:

said main route includes a plurality of main route valves provided for interrupting supply of pure water to said at least two ion exchangers by each one of said at least two ion exchangers; and

said plurality of main route valves are configured to close when flowing pure water through said first to third bypass routes.

9. (Amended) An ultrapure water producing apparatus comprising:

a total organic carbon meter having a decomposing device configured to decompose an organic substance by applying ultraviolet light to pure water and configured to measure an organic substance concentration of carbon dioxide generated by said decomposing device; and

an oxygen dissolution unit provided on an inlet side of said total organic carbon meter and configured to dissolve oxygen in the pure water to be supplied to said total organic carbon meter.

10. (Amended) The ultrapure water producing apparatus according to claim 9, wherein said oxygen dissolution unit includes a bubbling system for bubbling, in pure water, oxygen gas or ozone gas.

11. (Amended) The ultrapure water producing apparatus according to claim 9, wherein said oxygen dissolution unit includes a cooling system for cooling pure water supplied to said total organic carbon meter, thereby supplying cooled pure water with oxygen gas or ozone gas.